

## DEFENSE INFORMATION SYSTEMS AGENCY

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NREPLY Joint Interoperability Test Command (JTE)

13 Jan 12

### MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Cisco Unified Communication Manager Local Session Controller, Version 8.0(2)

References: (a) DoD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004

- (b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
- (c) through (e), see Enclosures included with the original certification memo (TN 1011801)
- 1. References (a) and (b) establish the Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.
- 2. The Cisco Unified Communications Manager (CUCM), Version 8.0(2), hereinafter referred to as the System Under Test (SUT) is certified for joint use in the Defense Information System Network (DISN) as a Local Session Controller (LSC). The Defense Information Systems Agency (DISA) adjudicated all open non-AS Test Discrepancy Reports (TDRs) to have a minor operational impact. The fielding of the SUT is limited to IP version 4 (IPv4) across the DISN. Intra-enclave use of IPv4 and IPv6 is authorized for use. The certification status of the SUT will be verified during operational deployment. Any new discrepancy noted in the operational environment will be evaluated for impact on the existing certification. These discrepancies will be adjudicated to the satisfaction of DISA via a vendor POA&M, which will address all new critical TDRs within 120 days of identification. Testing was conducted using LSC product requirements derived from the Unified Capabilities Requirements (UCR), Reference (c), and LSC test procedures, Reference (d). No other configurations, features, or functions, except those cited within this memorandum, are certified by JITC. This certification expires upon changes that affect interoperability, but no later than three years from the date of the original memorandum (23 September 2010).
- 3. The extension of this certification is based upon Desktop Review (DTR) 4. The original certification is based on interoperability testing conducted by JITC, review of the vendor's Letters of Compliance (LoC), and DISA Information Assurance (IA) CA approval of the IA configuration. Interoperability testing was conducted by JITC, Fort Huachuca, Arizona, from 28 June 2010 through 20 August 2010. Review of the vendor's LoC was completed on 21 September 2010. The validation and verification testing was conducted from 8 though 12 August 2011. The DISA CA has reviewed the IA Assessment Report for the SUT, Reference (e), and based on the findings in the report has provided a positive recommendation. The

acquiring agency or site will be responsible for the DoD IA Certification and Accreditation Process (DIACAP) accreditation. The JITC certifies the SUT as meeting the UCR for LSC requirements. This DTR was requested to include an upgrade of the 7900 series phones from firmware 9-0-2 to 9-2-1 to correct a vulnerability issue identified in IAVA 2011-B-0072. JITC approves this update based on Voice and Video test results of the 7900 series phones with firmware version 9-2-1, which was tested from 8 through 12 August 2011 with Cisco CUCM 8.0(2). The DISA CA provided a positive recommendation on 13 January 2012 based on the security testing completed by the DISA-led IA test teams. JITC therefore approves this DTR.

4. The interface, Capability Requirements (CR) and Functional Requirements (FR), and component status of the SUT is listed in Tables 1 and 2. The threshold Capability/Functional requirements for LSCs are established by Sections 5.3.2, 5.3.4, 5.3.5, and 5.4 of Reference (c) and were used to evaluate the interoperability of the SUT.

**Table 1. SUT Interface Interoperability Status** 

Interface	Critical	UCR Reference	Threshold CR/FR <sup>1</sup>	Status	Remarks <sup>2</sup>
			Line Interfaces		
10Base-X	Yes	5.3.2.6.3	2, 4, 10, 13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3i and 802.3j. Applies to PEIs and softphones.
100Base-X	Yes	5.3.2.6.3	2, 4, 10, 13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3u. Applies to PEIs and softphones.
1000Base-X	No	5.3.2.6.3	2, 4, 10,13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3ab. Applies to PEIs and softphones.
2-wire analog	Yes	5.3.2.6.1.6	2, 4, 10, and 13	Certified	Met threshold CRs/FRs for 2-wire instruments. Applies to 2-wire secure and non-secure analog instruments. Requirement met through use of an IAD integrated in the MG that supports IEEE 802.3i, 802.3u, and 802.3ab <sup>3</sup> .
BRI	No	5.3.2.6.1.8	2, 4, 10, and 13	Not Tested	This interface is offered by the SUT but was not tested because it does not support Assured Services.
			External Interfaces		
10Base-X	$No^4$	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3i and 802.3j. Applies to AS-SIP trunk.
100Base-X	No <sup>4</sup>	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3u. Applies to AS-SIP trunk.
1000Base-X	No <sup>4</sup>	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3z and 802.3ab. Applies to AS-SIP trunk.
ISDN T1 PRI ANSI T1.619a	Yes	5.3.2.4.3	2, 3, 7, 8, 10, and 13	Certified	Met threshold CRs/FRs. Provides legacy DSN and TELEPORT connectivity.
ISDN T1 PRI NI-2	Yes	5.3.2.4.3	2, 3, 7, 8, 10, and 13	Certified	Met threshold CRs/FRs. Provides PSTN Connectivity
T1 CCS7 ANSI T1.619a	No	5.3.2.12.9	2, 3, 7, 8, 10, and 13	Not Tested	This interface is not offered by the SUT.
T1 CAS	No	5.3.2.12.11	2, 3, 7, 8, 10, and 13	Not Certified	This interface is offered by the SUT but was not certified because of known discrepancies <sup>5</sup> .
E1 PRI ITU-T Q.955.3	No <sup>6</sup>	5.3.2.12.10	2, 3, 7, 8, 10, and 13	Certified	Tested under PBX1 configuration. Results applicable to LSC.
E1 PRI ITU-T Q.931	No <sup>6</sup>	5.3.2.12.10	2, 3, 7, 8, 10, and 13	Certified	Conditionally required for European PSTN connectivity.

Table 1. SUT Interface Interoperability Status (continued)

Interface	Critical	UCR Reference	Threshold CR/FR <sup>1</sup>	Status	Remarks <sup>2</sup>
			NM		
10Base-X	No <sup>4</sup>	5.3.2.4.4 5.3.2.7.2.8	16 and 17	Certified	Met threshold CRs/FRs. Verified via LoC.
100Base-X	No <sup>4</sup>	5.3.2.4.4 5.3.2.7.2.8	16 and 17	Certified	Met threshold CRs/FRs. Verified via LoC.

### NOTES:

- 1. CR/FR requirements are contained in Table 2. CR/FR numbers represent a roll-up of UCR requirements. Refer to Enclosure 3 of the original Certification Memo (TN 1011801) for a list of more detailed requirements for LSC products.
- 2. Paragraph 11 of Enclosure 2 of the original Certification Memo (TN 1011801) provides detailed information pertaining to open TDRs and associated operational impacts.
- 3. Voice calls from the SUT gateway analog interfaces via the UC DISN WAN require a loopback configuration of ANSI T1.619a ISDN PRI interfaces within each gateway (refer to CUCM deployment guide). This configuration requires translations in the gateways to route all out going analog calls placed towards the UC DISN WAN via the looped T1s. Additionally, incoming calls from the UC DISN WAN to analog end instruments on each gateway must be routed via the looped T1s. Without this configuration, analog end instruments cannot place calls via the UC DISN WAN. This configuration requires two looped ISDN PRI ANSI T1.619a T1s within each 3845 and 3945 gateways and will support a maximum of 69 analog interfaces per gateway. This allows for up to two ISDN PRI T1 interfaces or one ISDN PRI E1 interface for timing/network access. In addition, each 2851 and 2951 gateway requires one looped ANSI T1.619a ISDN PRI within each 2851 and 2951 gateway and will support a maximum of 23 analog interfaces per gateway. Both gateways also require a T1 or E1 interface for synchronization via recovered timing.
- 4. Must provide a minimum of one of the listed interfaces.
- 5. The SUT CAS interface had interoperability test discrepancies adjudicated to be critical for certification of this interface.
- 6. The interface is conditionally required for deployment in Europe.

T	FC	EN	n.

LEGEND.			
10Base-X	10 Mbps Ethernet	LoC	Letter of Compliance
100Base-X	100 Mbps Ethernet	LSC	Local Session Controller
1000Base-X	1000 Mbps Ethernet	Mbps	Megabits per second
802.3ab	1000 Mbps Ethernet over Twisted Pair	MG	Media Gateway
802.3i	10 Mbps twisted pair media for 10Base-X networks	MLPP	Multi-Level Precedence and Preemption
802.3j	10 Mbps fiber media for 10Base-X networks	NA	Not Applicable
802.3u	100BASE-TX, 100BASE-T4, 100BASE-FX Fast Ethernet	NI-2	National ISDN Standard 2
	at 100 Mbps with auto negotiation	NM	Network Management
802.3z	Standard for Gigabit Ethernet	PBX	Private Branch Exchange
ANSI	American National Standards Institute	PEI	Proprietary End Instrument
AS-SIP	Assured Services Session Initiation Protocol	PRI	Primary Rate Interface
BRI	Basic Rate Interface	PSTN	Public Switched Telephone Network
CAS	Channel Associated Signaling	Q.931	Signaling Standard for ISDN
CCS7	Common Channel Signaling	Q.955.3	ISDN Signaling Standard for E1 MLPP
CR	Capability Requirement	SS7	Signaling System 7
CUCM	Cisco Unified Communication Manager	SUT	System Under Test
DISN	Defense Information System Network	T1	Digital Transmission Link Level 1 (1.544 Mbps)
DSN	Defense Switched Network	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
E1	European Basic Multiplex Rate (2.048 Mbps)	TDR	Test Discrepancy Reports
FR	Functional Requirement	UCR	Unified Capabilities Requirements
IAD	Integrated Access device	VoIP	Voice over Internet Protocol
IEEE	Institute of Electrical and Electronics Engineers, Inc.	WAN	Wide Area Network
ISDN	Integrated Services Digital Network		
ITU-T	International Telecommunication Union –		
	Telecommunication Standardization Sector		

**Table 2. SUT CRs and FRs Status** 

CR/FR ID	Capability/Function	Applicability <sup>1</sup>	UCR Reference	Status	Remarks
	<b>Assured Services Product Features and Capal</b>	bilities			
	DSCP Packet Marking	Required	5.3.2.2.1.4	Met	
	Voice Features and Capabilities	Required	5.3.2.2.2.1	Partially Met <sup>2</sup>	
1	Public Safety Features	Required	5.3.2.2.2.2	Met	
	ASAC – Open Loop	Required	5.3.2.2.2.3	Met	
	Signaling Protocols	Required	5.3.2.2.2.3	Met	
	Signaling Performance	Required	5.3.2.2.2.4	Met	
	Registration, Authentication, and Failover				
2	Registration	Required	5.3.2.3.1	Met	
	Failover	Required	5.3.2.3.2	Met	
	Product Physical, Quality, and Environmenta	l Factors			
	Availability	Required	5.3.2.5.2.1	Partially Met <sup>3</sup>	
3	Maximum Downtimes	Required	5.3.2.5.2.2	Met	
	Loss of Packets	Applicability Renapabilities  Ing Required 5. Ites Conditional 5. Ites Required 5. Ites Req	5.3.2.5.4	Met	
	Voice End Instruments				
	Tones and Announcements	Required	5.3.2.6.1.1	Partially Met <sup>2,5</sup>	
	Audio Codecs	Required	5.3.2.6.1.2	Partially Met <sup>5</sup>	
	VoIP PEI or AEI Audio Performance Requirements	Required	5.3.2.6.1.3	Partially Met <sup>5</sup>	
4	VoIP Sampling Standard	Required	5.3.2.6.1.4	Partially Met <sup>5</sup>	
	Authentication to LSC	Required	5.3.2.6.1.5	Partially Met <sup>5</sup>	
	Analog Telephone Support	Required <sup>6</sup>	5.3.2.6.1.6	Partially Met <sup>7</sup>	
	Softphones	Conditional	5.3.2.6.1.7	Met <sup>8</sup>	
	ISDN BRI	Conditional	5.3.2.6.1.8	Not Tested	
	Video End Instruments				
	Video End Instrument	Required	5.3.2.6.2	Not Tested <sup>8</sup>	
5	Display Messages, Tones, and Announcements	Required	5.3.2.6.2.1	Not Tested <sup>8</sup>	
	Video Codecs (Including Associated Audio Codecs)	Required	5.3.2.6.2.2	Not Tested <sup>8</sup>	
	LSC Requirements		I		
	PBAS/ASAC Requirements		5.3.2.7.2.1	Met	
	Calling Number Delivery Requirements	Required	5.3.2.7.2.2	Met	
6	LSC Signaling Requirements	Required	5.3.2.7.2.3	Met	
	Service Requirements under Total Loss of WAN Transport	Required	5.3.2.7.2.4	Met	
6	Local Location Server and Directory	Required	5.3.2.7.2.5	Met	
	LSC Transport Interface Functions	Required	5.3.2.7.2.7	Met	
	LSC to PEI, AEI, and Operator Console Status Verification	Required	5.3.2.7.2.10	Partially Met <sup>9</sup>	
	Line-Side Custom Features Interference	Conditional	5.3.2.7.2.11	Met	
	Loop Avoidance	Required <sup>4</sup>	5.3.2.7.3	Met	

**Table 2. SUT CRs and FRs Status (continued)** 

CR/FR ID	Capability/ Function	Applicability <sup>1</sup> (See note 1.)	UCR Reference	Status	Remarks
	Call Connection Agent Requirements				
	CCA IWF Component	Required <sup>10</sup>	5.3.2.9.2.1	Met <sup>11</sup>	
	CCA MGC Component	Required <sup>10</sup>	5.3.2.9.2.2	Met	
	SG Component	Conditional	5.3.2.9.2.3	Not Tested <sup>11</sup>	
	CCA-IWF Support for AS-SIP	Required	5.3.2.9.5.1	Met	
	CCA-IWF Support for SS7	Conditional	5.3.2.9.5.2	Not Tested <sup>11</sup>	
	CCA-IWF Support for PRI via MG	Required	5.3.2.9.5.3	Met	
	CCA-IWF Support for CAS Trunks via MG	Conditional	5.3.2.9.5.4	Not Tested <sup>11</sup>	
	CCA-IWF Support for PEI and AEI Signaling Protocols	Required	5.3.2.9.5.5	Partially Met <sup>12</sup>	
7	CCA-IWF Support for VoIP and TDM Protocol Interworking	Required <sup>10</sup>	5.3.2.9.5.6	Met <sup>11</sup>	
	CCA Preservation of Call Ringing State during Failure Conditions	Required <sup>4</sup>	5.3.2.9.6	Met	
	CCA Interactions with Transport Interface Functions	Required	5.3.2.10.3	Met	
	CCA Interactions with the EBC	Required	5.3.2.10.4	Met	
	CCA Support for Admission Control	Required	5.3.2.10.5	Met	
	CCA Support for UFS	Required	5.3.2.10.6	Met	
	CCA Support for IA	Required	5.3.2.10.7	Met	
	CCA Interaction with EIs	Required	5.3.2.10.10	Partially Met <sup>5</sup>	
	CCA Support for AS Voice and Video	Required	5.3.2.10.11	Partially Met <sup>8</sup>	
	CCA Interactions with Service control Functions	Required	5.3.2.10.12	Met	
	CCA Interworking between AS-SIP and SS7	Conditional	5.3.2.11	Not Tested <sup>11</sup>	
	MG Requirements				
	Role of MG In LSC	Required	5.3.2.12.3.1	Met	
	MG Support for ASAC	Required	5.3.2.12.4.1	Met	
	MG and IA Functions	Required	5.3.2.12.4.2	Met	
	MG Interaction with Service Control Function	Required	5.3.2.12.4.3	Met	
	MG Interactions with IP Transport Interface Functions	Required	5.3.2.12.4.4	Met	
	MG-EBC interactions	Required	5.3.2.12.4.5	Met	
	MG IP-Based PSTN Interface Requirements	Conditional	5.3.2.12.4.7	Not Tested	
8	MG Interaction with EIs	Required	5.3.2.12.4.8	Met <sup>5</sup>	
	MG support for User Features and Services	Required	5.3.2.12.4.9	Met	
	MG Interface to TDM	Required	5.3.2.12.5	Met <sup>10,11</sup>	
	MG Interface to TDM Allied and Coalition	Conditional	5.3.2.12.6	Not Tested	
	MG Interface to TDM PSTN in US	Required	5.3.2.12.7	Met <sup>10</sup>	
	MG Interfaces to TDM PSTN OCONUS	Required	5.3.2.12.8	Partially Met <sup>10</sup>	
	MG Support for CCS7	Conditional	5.3.2.12.9	Not Tested <sup>11</sup>	
	MG Support for ISDN PRI Trunks	Required	5.3.2.12.10	Met	

**Table 2. SUT CRs and FRs Status (continued)** 

CR/FR ID	Capability/ Function	Applicability <sup>1</sup>	UCR Reference	Status	Remarks
	MG Requirements (continued)				
	MG Support for CAS Trunks	Required	5.3.2.12.11	Not Tested <sup>11</sup>	
	MG requirements for VoIP Internal Interfaces	Required	5.3.2.12.12	Met	
	MG Echo Cancellation	Required	5.3.2.12.13	Met	
8	MG Clock Timing	Required	5.3.2.12.14	Met	
	MGC-MG CCA Functions	Required	5.3.2.12.15	Met	
	MG V.150.1	Required	5.3.2.12.16	Not tested <sup>7</sup>	
	MG Preservation of Call Ringing during Failure	Required <sup>4</sup>	5.3.2.12.17	Met	
	SG Requirements	1			
9	SG and CCS7 Network Interactions	Conditional	5.3.2.13.5.1	Not Tested <sup>11</sup>	
9	SG Interactions with CCA	Conditional	5.3.2.13.5.2	Not Tested <sup>11</sup>	
	SG Interworking Functions	Conditional	5.3.2.13.5.3	Not Tested <sup>11</sup>	
	WWNDP Requirements				
10	WWNDP	Required	5.3.2.16	Met	
	DSN WWNDP	Required	5.3.2.16.1	Met	
11	Commercial Cost Avoidance				
11	Commercial Cost Avoidance	Required <sup>3</sup>	5.3.2.23	Not Tested	
12	AS-SIP Based for External Devices (Voicemail, U				
	AS-SIP Requirements for External Interfaces	Conditional	5.3.2.24	Not Tested	
13	Precedence Call Diversion	B : 1	5 2 2 25	3.6.	
	Precedence call Diversion	Required	5.3.2.25	Met	
14	Attendant Station Features  Precedence and Preemption	Required <sup>3</sup>	5.3.2.26.1	Not Tested <sup>13</sup>	
	Call Display	Required <sup>3</sup>	5.3.2.26.2	Not Tested  Not Tested  13	
	Class of Service Override	Required <sup>3</sup>	5.3.2.26.3	Not Tested  Not Tested  13	
		Required <sup>3</sup>	5.3.2.26.4	Not Tested  Not Tested  13	
	Busy Override and Busy Verification	Required <sup>3</sup>	5.3.2.26.5	Not Tested  Not Tested  13	
	Night service			Not Tested  Not Tested  13	
	Automatic Recall of Attendant	Required <sup>3</sup>	5.3.2.26.6	Not Tested <sup>13</sup>	
	Calls in Queue to the Attendant	Required <sup>3</sup>	5.3.2.26.7	Not Tested	
	AS-SIP Requirements  SIP Requirements for AS-SIP Signaling Appliances and AS-SIP EIS	Required <sup>3</sup>	5.3.4.7	Not Tested	
	SIP Session Keep-Alive Timer	Required	5.3.4.8	Met	
	Session Description Protocol	Required	5.3.4.9	Met	
	Precedence and Preemption			Met	
15	Video Telephony – General Rules	Required Required	5.3.4.10 5.3.4.12	Not Tested <sup>8</sup>	
	Calling Services	Required	5.3.4.12	Met	
	SIP Translation Requirements for Inter-working	-	3.3.4.13	iviet	
	AS-SIP Signaling Appliances	Required	5.3.4.14	Met	
	Relevant Timers for the Terminating Gateway and the Originating Gateway	Required	5.3.4.15	Met	

Table 2. SUT CRs and FRs Status (continued)

CR/FR ID	Capability/ Function	Applicability <sup>1</sup> (See note 1.)	UCR Reference	Status	Remarks
	AS-SIP Requirements (continued)				
	SIP Requirements for Interworking AS-SIP Signaling Appliances	Required	5.3.4.16	Met	
15	Keep-Alive Timer Requirements for Interworking AS-SIP Signaling Appliances	Required	5.3.4.17	Met	
	Precedence and Preemption Extensions for Interworking AS-SIP Signaling Appliances	Required	5.3.4.18	Met	
	Supplementary Services	Required	5.3.4.19	Met	
4.5	IPv6 Requirements				
16	Product Requirements	Required	5.3.5.4	Partially met <sup>14</sup>	
	NM				
	LSC Management Function	Required	5.3.2.7.2.6	Met	
	VVoIP NMS Interface Requirements	Required	5.3.2.4.4	Met	
17	General Management requirements	Required	5.3.2.17.2	Partially Met <sup>15</sup>	
	Requirement for FCAPS Management	Required	5.3.2.17.3	Partially Met <sup>15</sup>	
	NM requirements of Appliance Functions	Required	5.3.2.18	Partially Met <sup>15</sup>	
	Accounting Management	Required	5.3.2.19	Met <sup>16</sup>	

#### NOTES

- 1. Annotation of 'required' refers to high level requirement category. Applicability of each sub-requirement is provided in enclosure 3 of the original certification memo (TN 1011801).
- 2. The SUT had outstanding open TDRs at the completion of testing adjudicated by DISA to have a minor operational impact. The vendor has submitted a POA&M to address the open TDRs. Paragraph 11 of Enclosure 2 of the original certification memo (TN 1011801) provides additional details.
- 3. When the SUT fails from the primary processor to backup processor all active drop after approx 6-8 minutes. DISA adjudicated this TDR as minor with the vendor's submitted POA&M to fix by June 2011.
- 4. This requirement represents a new UCR requirement where the vendor has 18-months (July 2011) to comply.
- 5. SUT met the requirement for PEIs; SUT was not tested with generic AEI because no AEI was provided. AEIs are a new UCR 2008 Change 1 requirement; the vendor has 18-months (July 2011) to comply.
- 6. UCR 2008 Change 1 added 18-month rule for G.711 and V.150.1 IAD support.
- 7. Vendor submitted LoC stating compliance to V.150 however this feature could not be tested because it is not supported by other vendors. This is a new UCR 2008 change 1 requirement; therefore the vendor has until July 2011 to comply with this requirement.
- 8. SUT did not demonstrate video requirements (conditional for softphone). Vendor did not provide a PEI video capability. This was adjudicated by DISA to have a low operational impact because of the limited deployment of PEIs with video.
- 9. SUT partially met PEI requirements (no video). The AEI and Operator Console requirements were not tested; the 18-month rule for complying (July 2011) applies.
- 10. The SUT must meet T1 PRI (T1.619a and NI-2) IWF. The T1 CAS and T1 CCS7 are conditional.
- 11. The SUT met T1/E1 PRI IWF requirements. The T1 CAS is supported but not certified and T1 CCS7 is not supported by the SUT.
- 12. The SUT met PEI CCA-IWF requirements. The AEI CCA-IWF requirements were not tested. The 18-month rule applies to AEIs.
- 13. The Attendant Console requirements are new UCR requirements; 18-month rule applies.
- 14. The SUT submitted an IPv6 LoC with noted discrepancies. Open TDRs were adjudicated by DISA to have a minor operational impact with vendor submitted POA&M.
- 15. The SUT submitted an NM LoC with noted discrepancies. Open TDRs were adjudicated by DISA to have a minor operational impact with vendor submitted POA&M.
- 16. The SUT does not comply with the objective requirement for Record Format.

**Table 2. SUT CRs and FRs Status (continued)** 

LEGEND	) <b>:</b>		
AEI	AS-SIP End Instrument	LSC	Local Session Controller
AS	Assured Services	Mbps	Megabits per second
AS-SIP	Assured Services Session Initiation Protocol	MG	Media Gateway
BRI	Basic Rate Interface	MGC	Media Gateway Controller
C2	Command and Control	MFSS	Multi-Function Soft Switch
CAS	Channel Associated Signaling	MLPP	Multilevel Precedence and Preemption
CCA	Call Connection Agent	NI-2	National ISDN Standard 2
CR	Capabilities Requirement	NM	Network Management
CCS7	Common Channel Signaling	NMS	Network Management System
DHCP	Dynamic Host Configuration Protocol	OCONUS	Outside the Continental United States
DISA	Defense Information Systems Agency	PBAS	Precedence Based Assured Services
DSCP	Differentiated Services Code Point	PEI	Proprietary End Instrument
DSN	Defense Switched Network	POA&M	Plan of Action and Milestones
EBC	Edge Boarder Controller	PRI	Primary Rate Interface
EI	End Instrument	PSTN	Public Switched Telephone Network
FCAPS	Fault, Configuration, Accounting, Performance and	SG	Signaling Gateway
	Security	SIP	Session Initiation Protocol
FR	Functional Requirement	SS7	Signaling System 7
G.711	Standard for PCM of Voice Frequencies	SUT	System Under Test
ΙA	Information Assurance	T1	Digital Transmission Link Level 1 (1.544 Mbps)
IAD	Integrated Access Device	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
IP	Internet Protocol	TDM	Time Division Multiplexing
ID	Identification	TDR	Test Discrepancy Report(s)
ISDN	Integrated Services Digital Network	UCR	Unified Capabilities Requirements
IEEE	Institute of Electrical and Electronics Engineers, Inc.	UFS	User Features and Services
IP	Internet Protocol	U.S.	United States
IPv6	Internet Protocol version 6	VoIP	Voice over Internet Protocol
IWF	Interworking Function	WAN	Wide Area Network
JITC	Joint Interoperability Test Command	WWNDP	Worldwide Numbering and Dialing Plan
LoC	Letter of Compliance		

5. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. All associated data is available on the Defense Information Systems Agency Unified Capability Coordination Office (UCCO) website located at http://www.disa.mil/ucco/.

6. The JITC point of contact is Mr. Edward Mellon, commercial (520) 538-5159, or DSN 312-879-5159, e-mail address is edward.mellon@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The UCCO tracking number is 1011801.

## FOR THE COMMANDER:

Enclosure a/s

for BRADLEY A. CLARK

Chief

Battlespace Communications Portfolio

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DOT&E, Net-Centric Systems and Naval Warfare

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Defense Intelligence Agency

National Security Agency, DT

Defense Information Systems Agency, TEMC

Office of Assistant Secretary of Defense (NII)/DOD CIO

U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities Division, J68

Defense Information Systems Agency, GS23

# ADDITIONAL REFERENCES

- (c) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008, Change 1," 22 January 2010
- (d) Joint Interoperability Test Command, "Unified Capabilities Test Plan (UCTP),"
- (e) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of Cisco Unified Communications Manager (CUCM), Version 8.02, (TN 1011801),"